

**Lesson 3.6** (pages 86–87)

Make a table to *find a pattern*.

1. Mrs. Chu walks on the beach every day. On day 1 she walks  $\frac{1}{12}$  mi. On day 2 she walks  $\frac{2}{11}$  mi. On day 3 she walks  $\frac{3}{10}$  mi. On day 4 she walks  $\frac{4}{9}$  mi. If this pattern continues, how far does she walk on day 9?
2. Davon is saving his money for a new pair of sneakers. Each day he saves \$0.15 more than he saved the day before. He saved \$0.15 on the first day. How much will he save on the ninth day?
3. Brian's grandfather gave him \$0.10 on Monday, \$0.30 on Tuesday, \$0.60 on Wednesday, and \$1.00 on Thursday. If this pattern continues, how much will Brian receive on Sunday?
4. The Celebrity Limousine Service charges \$5.00 for the first  $\frac{1}{8}$  mi and \$0.75 for each additional  $\frac{1}{8}$  mi. What is the cost of a  $1\frac{1}{4}$ -mile trip?

**Lesson 6.7** (pages 194–195)

Find a *pattern* to solve.

1. Mr. Wilson is putting tape on his windows to prepare for a hurricane. His windows are square. He will put a strip of tape across all possible diagonals. He has 16 windows. How many strips of tape will he need?
2. Due to the hurricane, Mrs. Andreas is also taping her windows across all possible diagonals. She has 9 square windows, 1 window that is a regular octagon, and 1 window that is an equilateral triangle. How many strips of tape will she need?
3. What is the total number of diagonals there can be in a regular 22-sided polygon?
4. What is the total number of diagonals there can be in a regular 24-sided polygon?

For lesson 6.7 you may want to refer to your mathematical dictionary for the definition of a diagonal. You may want to use this octagon to help you solve #2.

